

LISTING OF CLAIMS:

1. (Currently amended) A method for measuring the thickness of an oxide film, comprising:

forming an oxide film on a substrate;

measuring an exposure period from a time at which the oxide film is formed to a time at which the thickness of the oxide film is measured; and

measuring the thickness of the oxide film by irradiating the oxide film with light, in accordance with light to obtain a temporary thickness; and

determining an actual thickness based on the temporary thickness and the exposure period.

2. (Currently amended) A method for measuring the thickness of an oxide film, comprising:

forming an oxide film on a substrate;

measuring an exposure period from a time at which the oxide film is formed to a time at which the thickness of the oxide film is measured; and

measuring the thickness of the oxide film by irradiating the oxide film with light; and ~~The method of claim 1, further comprising~~

correcting the thickness measurement of the oxide film, which is measured when the exposure period is elapsed, based on a relationship between the exposure period and the thickness of the oxide film to obtain the real thickness of the oxide film.

3. (Currently amended) The method of claim 2, wherein the method includes correcting the measurement according to the following formula:

$$y = a \cdot \ln(t) + b$$

in which t is the exposure period in minutes, from the formation of the oxide film to the measurement of the thickness, wherein t is at least one minute, y is the apparent thickness of the oxide film measured when the exposure period is elapsed, a is a constant determined by the atmosphere around the oxide film, and b is the real thickness of the oxide film.

4. (Canceled)

5. (Currently amended) A method for measuring a thickness of an oxide film, comprising:

forming an oxide film on a substrate;

washing a surface of the oxide film;

measuring an exposure period, which is defined from a time at which the surface of the oxide film is washed to a time at which the thickness of the oxide film is measured; and

measuring the thickness of the oxide film by irradiating the oxide film with light in accordance with to obtain a temporary thickness; and

determining an actual thickness based on the temporary thickness and the exposure period.

6. (Original) The method of claim 5, wherein the surface of the oxide film is washed using a solution containing at least one of H_2SO_4 and HCl .

7. (Original) The method of claim 6, wherein the solution is one of a mixed solution of H_2SO_4 and H_2O_2 and a mixed solution of HCl and H_2O_2 .

8. (Canceled)

9. (Currently amended) A method for measuring a thickness of an oxide film,
comprising:

forming an oxide film on a substrate;

washing a surface of the oxide film;

measuring an exposure period, which is defined from a time at which the surface of the oxide film is washed to a time at which the thickness of the oxide film is measured; and

measuring the thickness of the oxide film by irradiating the oxide film with light; and
~~The method of claim 5, further comprising~~

correcting the thickness measurement of the oxide film, which is measured when the exposure period is elapsed, based on a relationship between the exposure period and the thickness of the oxide film to obtain the real thickness of the oxide film.

10. (Currently amended) The method of claim 9, wherein the method includes correcting the measurement according to the following formula:

$$y = a \cdot \ln(t) + b$$

in which t is the exposure period, in minutes, from the washing of the oxide film to the measurement of the thickness, wherein t is at least one minute, y is the apparent thickness of the oxide film measured when the exposure period is elapsed, a is a constant determined by the atmosphere around the oxide film, and b is the real thickness of the oxide film.

11. (Canceled)

12. (Currently amended) A method for manufacturing a semiconductor device, comprising:

forming on oxide film;

measuring an exposure period defined from a time at which the oxide film is formed to a time at which a thickness of the oxide film is measured; and

determining the actual thickness of the oxide film by irradiating the oxide film with light ~~in accordance with the exposure period;~~

determining whether the thickness of the oxide film falls in a desirable range; and

performing a succeeding step for manufacturing the semiconductor device when the thickness of the oxide film falls in the desirable range.

13. (Previously presented) The method of claim 12, further comprising correcting the thickness measurement of the oxide film, which is measured when the exposure period is elapsed, based on a relationship between the exposure period and the thickness of the oxide film to obtain the real thickness of the oxide film, wherein:

the succeeding step is performed when the corrected thickness falls in the desirable range.

14. (Currently amended) The method of claim 13, wherein the method includes correcting the measurement according to the following formula:

$$y = a \cdot \ln(t) + b$$

in which t is the exposure period, in minutes, wherein t is at least one minute, y is the apparent thickness of the oxide film measured when the exposure period is elapsed, a is a constant determined by the atmosphere around the oxide film, and b is the real thickness of the oxide film.

15. (Canceled)

16. (Currently amended) A method for manufacturing a semiconductor device, comprising:

forming an oxide film;

washing a surface of the oxide film;

measuring an exposure period defined from a time at which the surface of the oxide film is washed to a time at which the thickness of the oxide film is measured; and

determining the actual thickness of the oxide film by irradiating the oxide film with light ~~in accordance with the exposure period;~~

determining whether the thickness of the oxide film falls in a desirable range; and

performing a succeeding step for manufacturing the semiconductor device when the thickness of the oxide film falls in the desirable range.

17. (Original) The method of claim 16, wherein the surface of the oxide film is washed using a solution containing at least one of H_2SO_4 and HCl .

18. (Original) The method of claim 17, wherein the solution is one of a mixed solution of H_2SO_4 and H_2O_2 and a mixed solution of HCl and H_2O_2 .

19. (Canceled)

20. (Previously presented) The method of claim 16, further comprising correcting the thickness measurement of the oxide film, which is measured when the exposure period is elapsed, based on a relationship between the exposure period and the thickness of the oxide film to obtain the real thickness of the oxide film.

21. (Currently amended) The method of claim 20, wherein the method includes correcting the measurement according to the following formula:

$$y = a \cdot \ln(t) + b$$

in which t is the exposure period, in minutes, wherein t is at least one minute, y is the apparent thickness of the oxide film measured when the exposure period is elapsed, a is a constant determined by the atmosphere around the oxide film, and b is the real thickness of the oxide film.

22. (Canceled)

23. (New) The method of claim 9, wherein the surface of the oxide film is washed using a solution containing at least one of H_2SO_4 and HCl .

24. (New) The method of claim 9, wherein the solution is one of a mixed solution of H_2SO_4 and H_2O_2 and a mixed solution of HCl and H_2O_2 .